

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S67	12	("4539615"   "4546541"   "4571651"   "4609960"   "4633332"   "4905103"   "5132861"   "5193045"   "5307217"   "5719724"   "5886843"   "5923281").PN. OR ("6473273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/01/31 18:26
S66	8	("4497005"   "4713710"   "4897745").PN. OR ("5050024").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/01/31 18:24
S65	4	((rotary or cylinder) near3 (base or board or substrate or slider)) and S64	US-PGPUB; USPAT	OR	ON	2008/01/31 18:12
S64	55	((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near2 (signal or volt\$4 or output)) and S63	US-PGPUB; USPAT	OR	ON	2008/01/31 18:11
S62	68	(same\$2 or equal or parallel or identical or similar or like or even or level coincide) near2 (height\$2 or level\$2 or elevation\$2 or rise\$2 or distance) and S61	US-PGPUB; USPAT	OR	ON	2008/01/31 18:10
S63	61	S62 and @pd<="20030620"	US-PGPUB; USPAT	OR	ON	2008/01/31 18:01
S61	112	(gap and (head or core or c-type or i-type) near2 (height or distance or length or difference) and (rotary or cylinder) and (tape or reel) and capstan and (signal or volt\$4 or output) and azimuth) and (base or board or substrate or slider)	US-PGPUB; USPAT	OR	ON	2008/01/31 17:37
S60	3	(gap and (head or core or c-type or i-type) near2 (height or distance or length or difference) and (rotary or cylinder) and (tape or reel) and capstan and (signal or volt\$4 or output) and azimuth) same (base or board or substrate or slider)	US-PGPUB; USPAT	OR	ON	2008/01/31 17:37
S58	0	("30" near1 deg) near2 (standard or azimuth) and S57	US-PGPUB; USPAT	OR	ON	2008/01/31 17:27
S59	2	(("6271990") or ("6735047")).PN.	US-PGPUB; USPAT	OR	OFF	2008/01/31 17:22

## EAST Search History

S57	16	(US-6263151-\$ or US-4916548-\$ or US-4819097-\$ or US-4811117-\$ or US-6154332-\$ or US-5490017-\$ or US-4972272-\$ or US-7050699-\$ or US-5563716-\$ or US-4079426-\$ or US-4725896-\$ or US-6473273-\$ or US-5576907-\$ or US-5426550-\$ or US-4186480-\$ or US-5050024-\$). did.	USPAT	OR	ON	2008/01/31 17:11
S56	1	("5050024").PN.	US-PGPUB; USPAT	OR	OFF	2008/01/31 16:38
S52	691	(head\$2 or "magnetic head" or "MR head" or core or block or portion or part or section or sector or C-type or "C type" or I-type or "I type" or "i core" or "c core" or c-core or i-core) near3 ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near2 (height\$2 or level\$2 or elevation\$2 or rise\$2 or distance)) with gap	US-PGPUB; USPAT	OR	ON	2008/01/31 16:38
S38	1	(advantage or desire or need or necesit\$3 or require\$4 or profit or benefit or gain or asset) near3 ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (shape or volume or contour or profile or form or figure or density or mass)) and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 16:13
S55	3	(gap near1 ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near2 (height\$2 or level\$2 or elevation\$2 or rise\$2 or distance))) with ((rotary or cylinder or tape) near2 (head\$2 or "magnetic head" or "MR head" or core or block or portion or part or section or sector or C-type or "C type" or I-type or "I type" or "i core" or "c core" or c-core or i-core))	US-PGPUB; USPAT	OR	ON	2008/01/31 16:12

## EAST Search History

S54	8	S52 same ((output or signal or volt\$4 or current or noise) near2 (balance\$2 or remove\$2 or improve\$2 or compensate\$2 or correct\$2 or rectify\$2 or subdu\$4 or lessen\$2 or extenuate\$2 or diminish\$2 or counterbalance\$2 or relieve\$2 or counteract\$2 or moderate\$2 or remedy\$2 or resist\$4 or alleviat\$4 or restrain\$4 or prevent\$4 or stop\$3 or mitigat\$4 or reduc\$4 or restrain\$3 or decreas\$ or control\$3 or isolat\$4 or align\$5))	US-PGPUB; USPAT	OR	ON	2008/01/31 16:04
S53	8	S51 and ((output or signal or volt\$4 or current or noise) near2 (balance\$2 or remove\$2 or improve\$2 or compensate\$2 or correct\$2 or rectify\$2 or subdu\$4 or lessen\$2 or extenuate\$2 or diminish\$2 or counterbalance\$2 or relieve\$2 or counteract\$2 or moderate\$2 or remedy\$2 or resist\$4 or alleviat\$4 or restrain\$4 or prevent\$4 or stop\$3 or mitigat\$4 or reduc\$4 or restrain\$3 or decreas\$ or control\$3 or isolat\$4 or align\$5))	US-PGPUB; USPAT	OR	ON	2008/01/31 15:55
S47	644	S45 with ((output or signal or volt\$4 or current or noise) near2 (balance\$2 or remove\$2 or improve\$2 or compensate\$2 or correct\$2 or rectify\$2 or subdu\$4 or lessen\$2 or extenuate\$2 or diminish\$2 or counterbalance\$2 or relieve\$2 or counteract\$2 or moderate\$2 or remedy\$2 or resist\$4 or alleviat\$4 or restrain\$4 or prevent\$4 or stop\$3 or mitigat\$4 or reduc\$4 or restrain\$3 or decreas\$ or control\$3 or isolat\$4 or align\$5))	US-PGPUB; USPAT	OR	ON	2008/01/31 15:54
S51	9	(head\$2 or "magnetic head" or "MR head" or core or block or portion or part or section or sector or C-type or "C type" or I-type or "I type") near3 ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near2 (height\$2 or level\$2 or elevation\$2 or rise\$2 or distance)) and S50	US-PGPUB; USPAT	OR	ON	2008/01/31 15:52

## EAST Search History

S50	15	(US-6263151-\$ or US-4916548-\$ or US-4819097-\$ or US-4811117-\$ or US-6154332-\$ or US-5490017-\$ or US-4972272-\$ or US-7050699-\$ or US-5563716-\$ or US-4079426-\$ or US-4725896-\$ or US-6473273-\$ or US-5576907-\$ or US-5426550-\$ or US-4186480-\$).did.	USPAT	OR	ON	2008/01/31 15:47
S45	53923	(head\$2 or "magnetic head" or "MR head" or core or block or portion or part or section or sector or C-type or "C type" or I-type or "I type") near3 ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near2 (height\$2 or level\$2 or elevation\$2 or rise\$2 or distance))	US-PGPUB; USPAT	OR	ON	2008/01/31 15:47
S49	47	S48 and ("360"/\$.ccls. or "369"/\$.ccls.)	US-PGPUB; USPAT	OR	ON	2008/01/31 14:04
S48	378	S47 and @pd<="20030620"	US-PGPUB; USPAT	OR	ON	2008/01/31 14:03
S44	48	S42 and @pd<="20030620"	US-PGPUB; USPAT	OR	ON	2008/01/31 13:59
S46	1363	S45 same ((output or signal or volt\$4 or current or noise) near2 (balance\$2 or remove\$2 or improve\$2 or compensate\$2 or correct\$2 or rectify\$2 or subdu\$4 or lessen\$2 or extenuate\$2 or diminish\$2 or counterbalance\$2 or relieve\$2 or counteract\$2 or moderate\$2 or remedy\$2 or resist\$4 or alleviat\$4 or restrain\$4 or prevent\$4 or stop\$3 or mitigat\$4 or reduc\$4 or restrain\$3 or decreas\$ or control\$3 or isolat\$4 or align\$5))	US-PGPUB; USPAT	OR	ON	2008/01/31 13:57
S36	1	((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (shape or volume or contour or profile or form or figure or density or mass)) with (volt\$4 or current or output or signal or noise)) and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:42

## EAST Search History

S41	819	(head\$2 or "magnetic head" or "MR head" or core or block or portion or part or section or sector or C-type or "C type" or I-type or "I type") with ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near2 (height\$2 or level\$2 or elevation\$2 or rise\$2 or distance) near3 (gap))	US-PGPUB; USPAT	OR	ON	2008/01/31 12:38
S42	70	S41 same (voltage or signal or output)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:27
S43	2	S42 and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:26
S34	45	((head\$2 or "magnetic head" or "MR head" or read or write) with ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (height\$2 or level\$2 or elevation\$2 or rise\$2))) and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:23
S40	12	((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (shape or volume or contour or profile or form or figure or density or mass)) near3 (core or block or portion or section or part or C-type or I-type or c adj type or i adj type or head)) and S39	US-PGPUB; USPAT	OR	ON	2008/01/31 12:18
S39	263	((same\$2 or equal or parallel or identical or similar or like or even or level coincide) with (volt\$4 or current or output or signal or noise)) and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:17
S28	501	((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (shape or volume or contour or profile or form or figure or density or mass)) near3 (core or block or portion or section or part or C-type or I-type or c adj type or i adj type or head)) with (gap)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:17

## EAST Search History

S35	1831	((head\$2 or "magnetic head" or "MR head" or I-type or core or C-type or "c type" or "i type" or block or portion or section or part) near3 ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (shape or volume or contour or profile or form or figure or density or mass))) with (volt\$4 or current or output or signal or noise)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:16
S37	1	S35 and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 12:15
S8	27	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) same ((head\$2 or "magnetic head" or "MR head" or read or write) with ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (height\$2 or level\$2 or elevation\$2 or rise\$2)))	US-PGPUB; USPAT	OR	ON	2008/01/31 11:50
S33	24	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) same (((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (shape or volume or contour or profile or form or figure or density or mass)) near2 (core or block or portion or section or part or C-type or I-type or c adj type or i adj type or head))	US-PGPUB; USPAT	OR	ON	2008/01/31 11:49
S23	2	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) and S19	US-PGPUB; USPAT	OR	ON	2008/01/31 11:47
S32	2	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) and S28	US-PGPUB; USPAT	OR	ON	2008/01/31 11:46
S31	11	S27 and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 11:42
S30	1	S28 and (S19 or S20 or S21 or S22)	US-PGPUB; USPAT	OR	ON	2008/01/31 11:42
S29	1	S27 and (S23 S24 S25 S26)	US-PGPUB; USPAT	OR	ON	2008/01/31 11:42

## EAST Search History

S27	13166	((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (shape or volume or contour or profile or form or figure or density or mass)) near3 (core or block or portion or section or part or C-type or I-type or c adj type or i adj type or head)) with (hole\$2 or bore\$2 or pit\$2 or hollow\$2 or aperture\$2 or pore\$2 or cavit\$3 or opening\$2 or orifice\$2 or gap\$3 or countersink\$2 or eye\$5 or perforation\$2 or cup\$2 or spac\$3 or breach\$3 or hiatus\$2 or break\$3 or spread\$3 or disrupt\$4 or blank\$2 or discontinuit\$2 or interrupt\$4 or interval\$2 or porous\$1 or slot\$3 or groove\$2 or keyhole\$2 or slit\$3 or channel\$2 or cut\$3)	US-PGPUB; USPAT	OR	ON	2008/01/31 11:41
S25	15	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) and S21	US-PGPUB; USPAT	OR	ON	2008/01/31 11:32
S26	6	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) and S22	US-PGPUB; USPAT	OR	ON	2008/01/31 11:20
S24	2	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) and S20	US-PGPUB; USPAT	OR	ON	2008/01/31 11:19
S22	590	360/130.21-130.24.ccls.	US-PGPUB; USPAT	OR	ON	2008/01/31 11:18
S21	115	360/271.5.ccls.	US-PGPUB; USPAT	OR	ON	2008/01/31 11:18
S15	5	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) with (head\$2 or "magnetic head" or "MR head" or read or write)) and (gap near3 (same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (height\$2 or level\$2 or elevation\$2 or rise\$2))	US-PGPUB; USPAT	OR	ON	2008/01/31 11:18
S20	74	360/271.1.ccls.	US-PGPUB; USPAT	OR	ON	2008/01/31 11:09
S19	56	360/271.ccls.	US-PGPUB; USPAT	OR	ON	2008/01/31 10:56

## EAST Search History

S18	1	(gap with (height\$2 or level\$2 or elevation\$2 or rise\$2)) and S16	US-PGPUB; USPAT	OR	ON	2008/01/30 17:14
S13	1	(gap near2 (height\$2 or level\$2 or elevation\$2 or rise\$2)) and S12	US-PGPUB; USPAT	OR	ON	2008/01/30 17:14
S17	0	S7 and S16	US-PGPUB; USPAT	OR	ON	2008/01/30 17:11
S7	211	((different\$1 or diverse or various or other or several or many) near2 (azimuth or clockwise or horizontal)) and ((head\$2 or "magnetic head" or "MR head" or read or write) with ((same\$2 or equal or parallel or identical or similar or like or even or level coincide) near1 (height\$2 or level\$2 or elevation\$2 or rise\$2)))	US-PGPUB; USPAT	OR	ON	2008/01/30 17:11
S16	3	360/119.ccls.	US-PGPUB; USPAT	OR	ON	2008/01/30 17:10
S14	3	(gap near2 (height\$2 or level\$2 or elevation\$2 or rise\$2)) and S7	US-PGPUB; USPAT	OR	ON	2008/01/30 16:39
S12	75	S11 and @pd<="20030620"	US-PGPUB; USPAT	OR	ON	2008/01/30 16:33
S1	1179	360/122.ccls.	US-PGPUB; USPAT	OR	ON	2008/01/30 16:29
S11	86	S7 and ("360"/\$.ccls. or "369"/\$.ccls.)	US-PGPUB; USPAT	OR	ON	2008/01/30 16:12
S10	15	S8 and ("360"/\$.ccls. or "369"/\$.ccls.)	US-PGPUB; USPAT	OR	ON	2008/01/30 16:11
S9	2	S7 and S1	US-PGPUB; USPAT	OR	ON	2008/01/30 16:00
S6	20	((different\$1 or diverse or various or other or several or many) near1 (azimuth or clockwise or horizontal)) and S2	US-PGPUB; USPAT	OR	ON	2008/01/30 15:46
S5	8	((different\$1 or diverse or various or other or several or many) near1 (azimuth or clockwise or horizontal)) and S1	US-PGPUB; USPAT	OR	ON	2008/01/30 15:42
S4	3	((different\$1 or diverse or various or other or several or many) near1 (azimuth or clockwise or horizontal)) and S3	US-PGPUB; USPAT	OR	ON	2008/01/30 15:34

## EAST Search History

S3	49	((("6211673") or ("6211673") or ("4291353") or ("4585929") or ("4325093") or ("5311375") or ("5382887") or ("5761008") or ("5877919") or ("6118625") or ("6249824") or ("4272795") or ("4279623") or ("4290088") or ("4291346") or ("4301486") or ("4323844") or ("4422115") or ("4517609") or ("4520409") or ("4935830") or ("5220473") or ("5229901") or ("5270885") or ("5384677") or ("5392169") or ("5432658") or ("5502522") or ("5629812") or ("5663854") or ("5678086") or ("5757575") or ("5783797") or ("5831798") or ("5945197") or ("5963397") or ("5968608") or ("6007896") or ("6049443") or ("6128160") or ("4296448") or ("4318146") or ("4322763") or ("4330804") or ("4396965") or ("4414595") or ("4419700") or ("4485420") or ("4489354") or ("4494125") or ("").pn.").PN)	US-PGPUB; USPAT	OR	OFF	2008/01/30 15:33
S2	4955	("ALPS ELECTRIC CO").as.	US-PGPUB; USPAT	OR	ON	2008/01/30 15:05